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THELIONEMA, A NEW GENUS OF THE PHORMIACEAE FROM AUSTRALIA

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Summary

The new combinations *Thelionema caespitosum* (*Stypandra caespitosa* R.Br.), *T. umbellatum* (*S. umbellata* R.Br.) and *T. grande* (*S. grandis* C. White) are made for the three species included in *Thelionema* R. Henderson. *Stypandra* R.Br. is relectotypified by *S. glauca* R.Br. after rejection of earlier lectotypification by *S. caespitosa*. *Styponema* Salisbury is lectotypified by *Stypandra glauca*. The three genera covered by Brown's original concept of *Stypandra* are distinguished by a key.

When dealing with species that Robert Brown included in his genus *Stypandra* (R.Br., Prod. 279 (1810)) in two forthcoming publications*, I intend to recognize them as belonging to three genera. Species 1 and 2 (*S. glauca* and *S. imbricata*) will be included under *Stypandra* and species 5 (*S. scabra*) will be dealt with under *Agrostocrinum* F.Muell. As species 3 and 4 (*S. caespitosa* and *S. umbellata*) are clearly generically distinct from species 1, 2 and 5, a generic name is here provided so they can be treated separately.

Thelionema R. Henderson, gen. nov. Plantae perennes. Folia lineari-ensiformia, stricta, caulina pauca, alterna, radicalia disticha basibus equitantibus. Flores paniculato-corymbosi, erecti, pedicellis subumbellatis basi bracteolatis. Perianthium 6 aeque partitum, patens, caeruleum vel albicans, marcescens. Stamina 6; filamenta ± fusiformia omnino papillosa-barbellata apicem versus et basin versus exclusa; antherae basi emarginatae insertae, defloratae revolutae. Ovarium 3-loculis polyspermis; stylus filiformis; stigma simplex. Capsula 3-valvata; semina splendentia vel polita. **Typus:** *T. caespitosum* (R.Br.) R. Henderson (*Stypandra caespitosa* R.Br.)

The genus consists of three species distributed in eastern and south-eastern Australia from Tasmania and southeast of South Australia to south-eastern Queensland.

The name is derived from Greek *thelion* — a little teat or nipple, and *nema* — a thread, in reference to the stamen filaments of included species which are papillary hairy throughout except near tip and base.

The following new combinations are now required:

1. **Thelionema caespitosum** (R.Br.) R. Henderson, **comb. nov.**
   Stypandra caespitosa R. Br., Prod. 279 (1810). **Typus:** Port Jackson [Sydney], in 1803, *R. Brown* [5704] (lectotypus:BM; isolectotypus:E).

Note. Due to errors in production or perhaps a change of mind on Brown's part, in the account of *Stypandra* in his *Prodromus*, the epithets in the names of species 3 and 4 are the reverse of those used in names written on relevant specimens agreeing with the protologue descriptions from Brown's herbarium now in the British Museum (Natural History), London (BM). The result therefore is that the type of *S. caespitosa* R.Br., a lectotype selected from material at BM, is a specimen collected by Brown labelled *Stypandra umbellata* in Brown's hand-writing, and vice-versa. Duplicates from these collections in the herbarium of the Royal Botanic Garden Edinburgh also bear names with epithets reversed to what they are in names in the *Prodromus*.

2. **Thelionema umbellatum** (R.Br.) R. Henderson, **comb. nov.**
   Stypandra umbellata R.Br., Prod. 279 (1810). **Typus:** Towards South Head and Botany Bay [Sydney], August-September 1803, *R. Brown* [5073] (lectotypus: BM; isolectotypus: E).

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* Volume 45, *Flora of Australia* (Canberra) and Volume II (Monocotyledons), *The Families and Genera of Vascular Plants* (Copenhagen).

3. Thelionema grande (C. White) R. Henderson, **comb. nov.**
Stypandra grandis C. White, Proc. Roy. Soc. Qd 57: 35 (1946). **Typus**: Mt Norman, Queensland, November 1944, *M.S. Clemens* s.n. (holotypus: BRI).

As I have previously lectotypified *Stypandra* R.Br. by *S. caespitosa* R.Br. (Henderson, 1984), some explanation and a rejection of the above lectotypification is here required to prevent *Thelionema* being rendered a superfluous and hence illegitimate generic name under the current International Code of Botanical Nomenclature (ICBN).

When first dealing with *Stypandra*, Brown (loc. cit.) observed that his genus appeared to be divisable into two groups, one of which was related to *Dianella* and the other to *Anthericum*. Though he diagnosed the two groups and allocated species to them he did not formally name them, preferring to designate them only as "I" and "II".

Salisbury (1866), apparently misinterpreting Brown's derivation of the name *Stypandra*, provided *Styponema* for *Stypandra* "sect." I stating that "the filaments not the anthers" are "stupose". He made no reference in that paper to part II of Brown's *Stypandra*. It is not clear whether Salisbury intended merely to replace Brown's name with one he considered more appropriate or to divide Brown's genus into two genera. No type for *Styponema* was cited or can be inferred as no species were mentioned with it, but it has to be the type of either *Stypandra glauca* or *S. imbricata* (ICBN, Art. 10).

In dealing with *Stypandra*, Baker (1876) recognized two subgenera one of which he called *Stypandra* subgenus *Styponema* and the other *Stypandra* subgenus *Eustypandra*. By the current ICBN this latter name is unacceptable as a subgenus name (Art. 21). Baker was no doubt giving formal standing to Brown's subgroupings after removal of *S. scabra* and, at the same time, acknowledging Salisbury's generic name by applying *Styponema* to one of his subgenera. It is clear he was describing the subgenera as new and not making a new combination of Salisbury's generic name for one of them. The type of Baker's *Stypandra* subgenus *Styponema* is automatically the type of *S. glauca* R.Br. as it is the only species he included in that subgenus. What he considered the equivalent of type of the generic name or of his *Stypandra* subgenus *Eustypandra* is not clear. The type of either *S. caespitosa* R.Br. or *S. umbellata* R.Br., names of the only two species included in his subgenus *Eustypandra*, would qualify as type of his name. *Stypandra scabra* was transferred to the genus *Caesia* R.Br. as *C. scabra* (R.Br.) Baker.

When Bentham and Hooker (1883) dealt with *Stypandra*, they said of *S. glauca* R.Br. that it belonged to "sect. *Eustypandra* Baker; *Styponema* Salisbury", and of *S. caespitosa* R.Br. and *S. umbellata* R.Br. that they belonged to "sect. *Styponema* Baker, non Salisbury". It is debatable whether they intended reducing Baker's subgenera to sections or Salisbury's genus to a section of *Stypandra*. As they transposed Baker's names for Baker's taxa their comments seem quite confused. It is best therefore to consider that they did not intend to introduce new names and that the names they used are not validly published and hence have no standing under the ICBN (Art. 34, Art. 6).

Guided by Baker's account, in notes attached to my paper with Professor Clifford (Henderson & Clifford, 1984), I nominated *S. caespitosa* as type of *Stypandra* to fix application of the name *Stypandra* so that when Brown's original circumscription of the genus is restricted, *Stypandra* applies to one element and *Styponema* to the other (once *S. scabra* is removed). In this way I considered the interests of all past botanists dealing with this group of plants would best be served.

In writing the group up for the volume of *Flora of Australia* dealing with Liliaceae in the broad sense, however, I have become aware that it is quite inappropriate to consider either *S. caespitosa* or *S. umbellata* when typifying *Stypandra*. The name itself is derived from tow-like strands on the stamens, and in the generic description Brown (loc. cit.) described stamens as having filaments below attenuate, curved and glabrous, and above stupose-barbate. This description does not apply and cannot be accepted as applying to the stamen filaments in *S. caespitosa* or *S. umbellata*. In these species the relevant parts are attenuate-fusiform and shortly papillate-barbellate throughout except near the tip and base. I therefore reject my earlier lectotypification by an element that is at variance with the generic diagnosis in favour of an element that is in perfect agreement with it (ICBN, Art. 8). I now select *Stypandra glauca* as

lectotype, a type that, on reflection, is the obvious basis for Brown's name *Stypandra* and basis of the generic diagnosis and the major part of his generic description. Many parts of his diagnosis and description, however, apply equally to *Stypandra* and *Thelionema*.

In summary then, I now consider the nomenclature and essential synonomy for this group of species to be as follows:

Stypandra R.Br. (1810). Type: *Stypandra glauca* R.Br. (lecto — here designated)
Styponema Salisb. (1866). Type: *Stypandra glauca* R.Br. (lecto — here designated)
Stypandra subgenus *Styponema* Baker (1873). Type: *Stypandra glauca* R.Br. (holo)

Agrostocrinum F.Muell., Fragmenta 2: 94 (1860). Type: *Agrostocrinum stypandroides* F.Muell. (= *A. scabrum* (R.Br.) Baillon, Bull. Mens. Soc. Linn. Paris 142:1119 (1894): *Stypandra scabra* R.Br.)

Thelionema R. Henderson (1985). Type: *Thelionema caespitosum* (R.Br.) R. Henderson: *Stypandra caespitosa* R.Br.
Stypandra subgenus *Eustypandra* Baker (1873), nom. reject. Type: not designated (*Stypandra caespitosa* R.Br. or *Stypandra umbellata* R.Br.)

The three genera may be distinguished as follows:

Flowers nodding: stamen filaments glabrous below middle, stupose-barbate in upper half: seed lenticular with margins ridged, dull black ..... **Stypandra**

Flowers held erect: stamen filaments glabrous or ± papillose-barbellate throughout: seed laterally compressed with margins rounded, shiny or glossy black.....

Buds setose: tepals thickened towards base, upper portions thin and deciduous: stamen filaments glabrous: anthers shortly appendaged near base, always straight ..... **Agrostocrinum**

Buds glabrous: tepals uniformly thin throughout, marcescent: stamen filaments glabrous only at tip and base: anthers without appendages, recurved after dehiscence..... **Thelionema**

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